CARGO LIQUEFACTION

Ships and their crews continue to be lost as a consequence of cargo liquefaction.

New deep mining methods of extracting ores and minerals from below the water table, are resulting in the raw commodities containing higher moisture levels than was previously the case. The problem is known to be exacerbated during the monsoon period when stockpiled ores are exposed to further moisture.

Many types of cargo are subject to liquefaction, the most common being mineral concentrates, pyrites, sinter/pellet feed, fluorspar, millscale and certain coal cargoes. This is not however, an exhaustive list.

The carriage of cargoes prone to liquefaction is complicated by the fact that the cargo may appear dry at the time of loading. During the sea passage the cargo is subjected to engine vibration, ship movements and wave impact, resulting in compaction of the cargo. If the moisture content of the cargo is excessive, the cargo can quickly change from a solid state to a fluid state. It is this change in behaviour and sudden shifting of the cargo that can lead to the rapid and unexpected loss of the vessel.

The IMSBC Code contains strict requirements for the testing and certification designed to ensure that only cargoes with an acceptable and safe moisture content are shipped. Such certification is provided.
by the shippers, and unfortunately it appears that many shippers continue to provide inaccurate declarations and certificates.

When loading cargoes prone to liquefaction Owners must:

- Ensure that proper IMBSC Code Documentation, including shipper’s declaration and certificate of moisture content, is provided.
- Verify the shipper’s documentation against the provision of the IMSBC Code.
- Refuse to load any cargo until such time as it has been properly tested, documented and certified safe to carry.
- Support the Master in his right under SOLAS to refuse to load the cargo or stop the loading of cargo considered not to be safe or that may affect the safety of the ship and crew.

The ultimate decision as to whether the cargo is safe to carry rests with the Master of the vessel. If the Master is not fully satisfied that the cargo is safe to carry, Owners should be prepared to refuse to load the cargo, and deal with the contractual consequences.

If the Owners or Master have any concerns as to the condition of the cargo to be loaded they should immediately contact Lodestar or a Lodestar listed Correspondent for assistance and guidance.